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NEW APPLICATION



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BEFORE THE ARIZONA CORPORATION COMMISSION

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2018 JUL -2 P 4: 46

JUL 02 2018

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E-04204A-18-0239

COMMISSIONERS

TOM FORESE - CHAIRMAN
BOB BURNS
ANDY TOBIN
BOYD W. DUNN
JUSTIN OLSON

IN THE MATTER OF THE APPLICATION OF)
UNS ELECTRIC, INC. FOR APPROVAL OF ITS)
2019 RENEWABLE ENERGY STANDARD)
IMPLEMENTATION PLAN.)

DOCKET NO. E-04204A-18-_____

APPLICATION

UNS Electric, Inc. ("UNS Electric" or the "Company"), through undersigned-counsel, hereby submits its 2019 Renewable Energy Standard and Tariff ("REST") Implementation Plan ("Plan") for Arizona Corporation Commission ("Commission") approval, in compliance with A.A.C. R14-2-1801 *et seq.*

UNS Electric remains committed to compliance with the 2019 REST requirement of providing at least nine (9) percent of retail sales (or approximately 147,000 MWh) from renewable generating resources as cost-effectively as possible. Key components of the Plan include: (i) utility-scale generation; (ii) distributed generation incentive legacy payments; and (iii) proposed rates and REST tariffs.¹

The estimated cost to implement the 2019 Plan is approximately \$9.2 million (exclusive of carryover funds impact), which is an increase from the 2018 Plan budget of \$8.9 million. UNS Electric proposes to recover approximately \$8.7 million through the REST tariff, which reflects a carryover of approximately \$600,000 in over-collections from 2017. In order to implement this Plan, UNS Electric requests that the Commission approve: (i) a REST tariff rate of \$0.0126 per kWh, which is lower than the 2018 tariff rate of \$0.0155 per kWh and (ii) a reduction in the surcharge caps

¹ Exhibit 3 (Above-Market Cost of Comparable Conventional Generation by Technology) and Exhibit 5 (IP Resource Costs) of the Plan are confidential and will be provided to Commission Staff upon execution of a protective agreement.

1 for a portion of small general service customers and an increase in surcharge caps for large general
2 service and interruptible customer classes (the caps for the other customers would remain the same as
3 2018). The change in the surcharge caps reflects the impact of the new medium general service class.

4 UNS Electric is not proposing any new incentives for residential or non-residential distributed
5 generation or other technologies. UNS Electric's Plan provides for renewable generation to meet the
6 2019 annual compliance requirement, with the exception of the residential portion of the annual
7 Distributed Renewable Energy Requirement set forth in A.A.C. R14-2-1805(D). Although sufficient
8 residential distributed generation has been, and is being deployed to meet the requirement, the
9 Company does not receive Renewable Energy Credits (RECs) from systems that have not received an
10 upfront incentive. Therefore, the Company respectfully requests a waiver for the residential portion
11 of the Distributed Renewable Energy Requirement, as outlined in the Plan.


12 UNS Electric believes it is in the public interest to implement cost-effective, customer-based
13 solutions to meet the Company's REST requirements while providing safe, reliable and affordable
14 energy to all its customers. Accordingly, UNS Electric requests that the Commission to issue an order
15 prior to December 31, 2018 to be effective January 1, 2019, that approves:

- 16 1. UNS Electric's 2019 Renewable Energy Implementation Plan;
- 17 2. The REST tariff rate of \$0.0126 per kWh for 2019;
- 18 3. The monthly caps for customer classes as set forth in the Plan; and
- 19 4. A waiver of the 2019 residential Distributed Renewable Energy Requirement.

20
21 RESPECTFULLY SUBMITTED this 2nd day of July 2018.

22 UNS ELECTRIC, INC.

23
24 By



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UNS Electric, Inc.
2019 Renewable Energy Standard
Implementation Plan

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I. EXECUTIVE SUMMARY

UNS Electric, Inc. (“UNS Electric” or “Company”) hereby submits its 2019 Implementation Plan (“Plan” or “IP”) in compliance with the Arizona Corporation Commission’s (“ACC” or “Commission”) Renewable Energy Standard and Tariff (“REST”) Rules pursuant to Arizona Administrative Code (“A.A.C.”) R14-2-1813. The cost-effective strategy set forth in the Plan demonstrates UNS Electric’s commitment to fulfilling the REST requirements for 2019 and beyond. Key components of the Plan include: existing and new renewable energy resources; proposed and existing Company programs and budgets; and the related REST tariff.

Pursuant to A.A.C. R14-2-1804 and R14-2-1805, UNS Electric must obtain nine (9) percent of its 2019 annual retail sales from eligible renewable resources; thirty (30) percent of that renewable energy must come from eligible distributed generation (“DG”) resources (as set forth in A.A.C. R14-2-1805(B)). Further, UNS Electric must meet one-half of its annual DG requirement from residential applications and the remaining one-half from non-residential, non-utility applications (as set forth in A.A.C. R14-2-1805(D)). UNS Electric plans to satisfy these REST requirements using existing utility-scale renewable generation and credits, including utility-owned assets and power purchase agreements (“PPA”); and applicable DG resources.

To fund these efforts, UNS Electric is proposing to recover approximately \$8.7 million through the REST tariff, which includes approximately \$0.6 million of over-collected funds from Plan year 2017. The estimated cost to implement the Plan is approximately \$9.2 million. Of this amount, approximately \$7.9 million is attributable to the cost of utility-scale renewable energy purchases in excess of the cost of conventional generation. The remaining budget funds legacy performance-based incentive payments, and program and administrative costs. The 2019 overall budget is approximately \$0.3 million greater than the 2018 budget; however, the 2019 budget has a large carry-forward applied to it, so the corresponding 2019 REST proposed collection will be significantly less than the amount approved for 2018.

The cost of renewable energy is included in two components of UNS Electric’s rates – the REST surcharge and the Purchased Power and Fuel Adjustment Clause (“PPFAC”). Due to changes in the cost of conventional generation, the 2019 market price for conventional generation is less than what was included in the UNS Electric’s 2018 Plan. As a result, the cost of renewable energy in excess of conventional generation included in 2019 UNS Electric’s Plan is approximately \$0.5 million greater than in 2018’s budget and the corresponding decrease is in

the cost of conventional generation that will be reflected in the Company's PPFAC. UNS Electric expects its annual REST budgets for 2019-2023 to be approximately \$8 million per year (see Exhibit 1), with declining amounts in later years.

UNS Electric's Plan demonstrates the Company's commitment to meeting the renewable energy requirements in the most cost effective manner and in the public's interest. UNS Electric's Plan provides for renewable generation to meet the 2019 annual compliance requirement, including the non-residential DG requirement as set forth in A.A.C. R14-2-1805(D); however, UNS Electric will require a waiver for the residential portion of the Distributed Renewable Energy Requirement¹. UNS Electric respectfully requests that the Commission approve the Plan, as well as its associated budget and tariff prior to December 31, 2018, to be effective January 1, 2019.

II. IMPLEMENTATION PLAN COMPONENTS

For 2019, UNS Electric's Annual Renewable Energy Requirement, as set forth in A.A.C. R14-2-1804, is nine (9) percent of retail kWh sales, a level projected to equal 147,508 megawatt hours ("MWh"). The REST requirements target two resource categories: utility-scale generation and distributed generation ("DG").

A. Utility-Scale Renewable Generation

UNS Electric will satisfy the 2019 utility-scale requirement through renewable resources capable of producing approximately 250,108 MWh (see Table 1). These resources include Company-owned systems and utility-scale projects developed through PPAs. Utility Scale Projects of this size are usually measured in alternating current ("AC" or "ac".) Company-owned resources includes two solar array systems in Kingman, a 0.98 megawatt ("MWac") system and a 4 MWac solar array. Also owned is a 5.76 MWac solar array near Rio Rico. Resources secured through PPAs include an 8.9 MWac solar array near the Company's Black Mountain Generating Station in Mohave County, a 10.2 MWac combined wind and solar resource in the Kingman area, and a 30.0 MWac solar facility to serve Santa Cruz County (Red Horse II Expansion). Additionally, a PURPA²/REC

¹ A.A.C. R14-2-1805(D)

² This project is considered a qualifying facility as defined by the Public Utilities Regulatory Act ("PURPA"). As such the cost of energy will be recovered through the PPFAC. Also, the Company will purchase RECs from Greyhawk, which will be recovered through REST.

-only contract in the Kingman Area, Gray Hawk¹, is a 46 MWac solar array which is estimated to be completed in the 2nd quarter of 2018. In addition to assisting non-residential DG Requirements (through the wholesale allotment), these projects will provide UNS Electric with enough renewable power to exceed its utility-scale REST requirements in 2019. Graph 1 below shows how UNS Electric's current and planned resources will allow the Company to satisfy its utility-scale REST requirements through 2025.

Graph 1. Renewable Energy Standard Targets

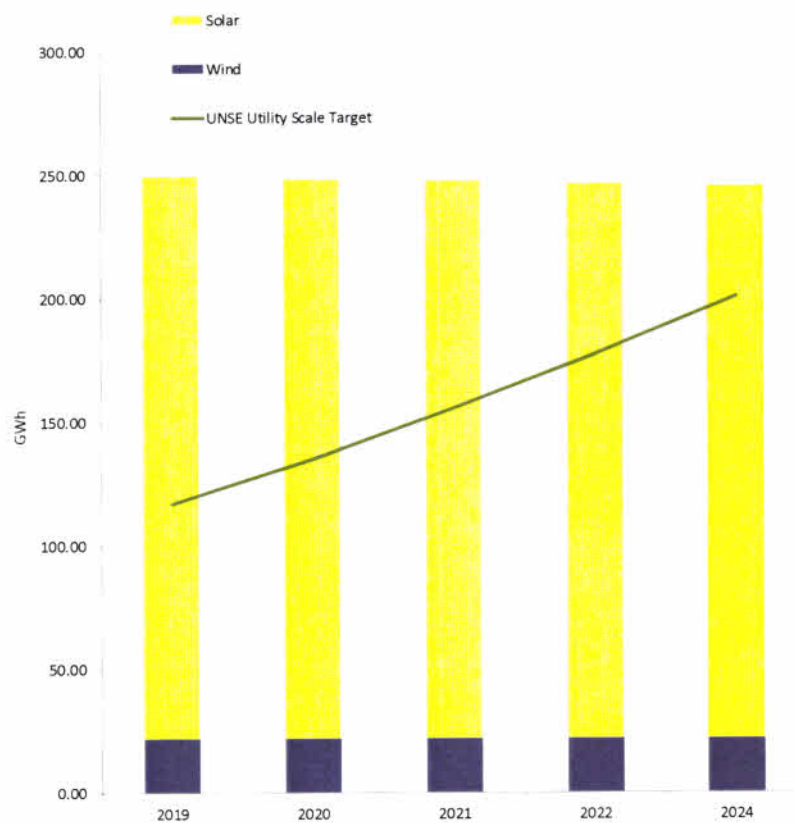


Table 1 details UNS Electric’s utility-scale projects, including existing systems and planned resources.

Table 1. Utility Scale Renewable Projects: Existing and Planned

Project	Capacity MWac	Capacity MWdc	2019 Expected Annual MWh	Technology	Expected In-Service Date	UNSE Owned
Existing Renewable Generation						
La Senita	0.98	1.22	2,155	Single-Axis PV	Operational	Yes
Rio Rico	5.76	7.20	9,397	Fixed PV	Operational	Yes
Jacobson	4.00	5.00	9,413	Fixed PV	Operational	Yes
Kingman Wind Farm	10.00		21,900	Wind	Operational	No
Black Mountain Solar	8.90	9.87	20,427	Single-Axis PV	Operational	No
Kingman Wind Farm (Solar)	0.24	0.30	507	Single-Axis PV	Operational	No
Red Horse II (Expansion)	30.00	37.50	78,054	Single-Axis PV	Operational	No
Total Existing	59.88	61.09	141,853			
Future Renewable Generation						
Gray Hawk Solar	46.00	64.50	108,255	Single-Axis PV	Jun-18	No
Total Future – Pending (Contracts)	46.00	64.50	108,255			
Total Planned Generation thru 2019	105.88	125.59	250,108.09			

B. Bright Arizona Solar Buildout Plan

In Decision No. 74877 (December 23, 2014), the Commission approved \$5 million each for 2015 and 2016 for the UNS Electric ownership plan (“Bright Arizona Buildout Plan” or “Buildout Plan”). The UNS Electric Buildout Plan has been an essential component of the Company’s renewable energy strategy; however, as stated in the Company’s 2016 REST Plan and shown in Table 2, the Company will no longer request recovery of new expenditures through the REST Program, other than those already approved. As UNS Electric continues to invest and expand its utility-scale portfolio, the company will recover those costs in rate case proceedings.

Table 2. Bright Arizona Solar Buildout Plan Investment Timeline

Year Installed	Year Recovered	Annual Capital Investment	Approximate MWac Capacity
2017	2015	\$ 5,000,000	4.6
2017	2016	5,000,000	
2-Year Total		\$ 10,000,000	

The revenue requirement includes recurring costs related to the 2015-2016 UNSE 4 MWac capital investment, including return on investment, depreciation, property taxes, and operations and maintenance (“O&M”) expense. UNS Electric seeks continued recovery of these costs through the REST tariff as approved by the Commission until such investments and related costs can be included in base rates. [Table 3](#) outlines the overall revenue requirements for the last project included in the Buildout Plan that was approved for recovery through the REST. [Table 4](#) breaks down the costs for the Buildout Plan for that project.

Table 3. Overall Annual Revenue Requirement for the Buildout Plan

Revenue Requirement	2019	2020	2021	2022	2023
Carrying Costs	\$ 470,603	\$ 426,518	\$ 327,362	\$ 167,374	\$ -
Book Depreciation	400,000	400,000	400,000	200,000	-
Property Tax Expense	31,211	31,991	32,791	16,806	-
O&M	78,030	79,591	81,182	41,403	-
Lease Expense	-	-	-	-	-
Total Revenue Requirement	\$ 979,844	\$ 938,100	\$ 841,335	\$ 425,583	\$ -

Table 4. Annual Revenue Requirement for the Buildout Plan by Project

Utility Owned Solar Projects by Year	2019	2020	2021	2022	2023
Jacobson 4 MWac	\$ 979,844	\$ 938,100	\$ 841,335	\$ 425,583	\$ -
Annual Revenue Requirement	\$ 979,844	\$ 938,100	\$ 841,335	\$ 425,583	\$ -

C. Distributed Generation Incentive Program

UNS Electric is not proposing any new incentives for residential or non-residential solar DG or any other technologies. The Company anticipates that sufficient renewable DG will be generated in its service territory to meet the 2019 non-residential DG requirements, as shown in [Table 5](#). In addition, Table 5 shows the estimated residential DG requirements for 2019. As shown by the “Est. RECs Available” column, the Company will have the ability to retire approximately 15.7 million residential RECs towards the 22.1 million RECs needed for 2019 compliance with the residential DG requirement. When including residential DG production, of which the Company does not own the associated RECs and corresponding ability to retire, this value becomes approximately 49.2 million kWh. The Company does not have the ability to retire these RECs because it no longer pays

incentives necessary to acquire them from qualifying projects. The Commission has acknowledged the dilemma of REC ownership vs. the requirements of A.A.C. R14-2-1805 in Decision No. 74365. Pursuant to Decision No. 74365, the Company respectfully requests a full permanent waiver from the requirements of A.A.C. R14-2-1805 for 2019.

Table 5 sets forth the Company's projections for 2019 DG Compliance, as well as the capacity and expected production from both (i) DG facilities that the Company holds title to the RECs, and (ii) DG facilities in the Company's service territory for which it does not receive RECs.

Table 5. Estimated DG Compliance

2019	Est. DG Req't (kWh)	Capacity (kW)	Est. RECs Available
Residential	22,126,203	10,000	15,670,742
Non-Residential	22,126,203	20,270	25,999,612
Non-Incentivized			
Residential		18,670	33,606,000
Non-Residential		3,497	6,294,600

UNS Electric is including in the requested Plan budget funds for on-going performance-based incentives ("PBI") awarded in prior years, before those incentive programs were discontinued. To fund these programs, the budget for the proposed incentive program is \$892,297.

D. Market Cost of Comparable Conventional Generation

Consistent with the REST Rules, UNS Electric calculates program expenses using the Market Cost of Comparable Conventional Generation ("MCCCG")³. Details on the methodology for the MCCCG calculation are included in Exhibit 2 attached hereto. The annual MCCCG rates are calculated in advance and stated as a single dollar per MWh value by technology type. The costs per project that are recovered through the REST are

³ A.A.C. R14-2-1801(K) which defines "MCCCG" calculations.

referred to as the Above Market Cost of Comparable Generation (“AMCCCG”). These expenses are based on the PPA pricing after subtracting the corresponding MCCCCG based on projected hourly energy profiles and are included in Exhibits 3⁴ (AMCCCG) (confidential) and Exhibit 5 (IP Resource Costs) (confidential). Exhibit 4 (IP Resources) shows associated energy production. The profiles are determined by UNS Electric’s production cost model. The MCCCCG will be included for wind, PV systems, concentrated solar with storage, and bio-fueled renewable resources.

III. THE PLAN BUDGET

Table 6. Plan Budget by Category

Category	Budget
Utility Scale	\$7,859,387
Existing Large Non-Residential PBI	892,297
Operating Costs (Education and Outreach, Technical Training, I.T., Metering, Labor, R&D)	497,288
2019 Program Cost	\$9,248,972
2017 Carryover of over collected funds	591,319
Total 2019 Plan	\$8,657,653

As stated previously, UNS Electric is proposing to recover approximately \$8.7 million through the REST tariff to fund the 2019 Plan which includes \$0.6 million carry forward of over collected funds from the 2017 Plan. The estimated cost to implement the Plan for 2019 is \$9.2 million. The Plan’s detailed budget is attached as Exhibit 1, which includes a breakdown of the costs for utility-scale energy, residential and non-residential DG programs, research and development, outside services support and reporting, technology, and education and outreach.

⁴ Exhibits 3 and 5 will be provided to Commission Staff upon execution of a Protective Agreement.

IV. 2019 REST TARIFF

The Company's REST tariff rate is contained in the attached Exhibit 6⁵. UNS Electric's Plan proposes lowering the tariff rate from \$0.0155kWh to \$0.0126/kWh and increasing the current monthly caps for Large General Service and Interruptible Power Service. The decrease is due to a \$0.6 million roll-over of funds from the 2017 REST Plan. Proposed monthly surcharge caps correspond to the rate categories that were approved in Phase 1 of UNS Electric's rate case (Docket No. E-04204A-15-0142). The monthly surcharge caps were developed using the proportional cap allocation method previously approved by the Commission.

Table 7 details the Company's approved budget and proposed budget for 2019, delineated by rate class. Table 8 sets forth the currently approved customer class caps and the caps proposed for the Plan.

Table 7. 2019 Budget by Rate Class

Rate Class	2018 ACC Approved	Proposed 2019
Residential	\$ 4,289,674	\$ 4,189,912
Residential Bright Community Solar	12,188	11,823
Residential Average	67,801	94,067
Small General Service	1,801,305	1,463,511
Small General Service Average	7,920	7,535
Medium General Service	2,331,080	2,132,940
Medium General Service Average	40,401	45,098
Large General Service	67,550	84,148
Large General Service Average	4,200	5,400
Interruptible Power Service	43,551	82,889
Interruptible Power Service Average	1,533	3,800
Industrial & Mining	615,393	528,464
Lighting	11,459	9,734
Total	\$ 9,294,054	\$ 8,659,322

⁵ Customer Load Percentage Analysis is set forth in the attached Exhibit 7.

Table 8. 2019 Surcharge Caps by Rate Class

Rates	2018 Approved	2019 Proposed	REST % of Average Bill
Residential	\$ 4.90	\$ 4.90	5.72%
Small General Service	\$ 60.00	\$ 45.00	1.19%
Medium General Service	\$ 190.00	\$ 190.00	6.75%
Large General Service	\$ 350.00	\$ 450.00	1.09%
Interruptible Power Service	\$ 175.00	\$ 275.00	4.95%
Lighting	\$ 130.00	\$ 130.00	9.51%
Industrial & Mining	\$ 11,250.00	\$ 11,250.00	8.55%
Per kWh to all Classes	\$ 0.0155	\$ 0.0126	

V. RENEWABLE ENERGY BALANCING, INTEGRATION, AND TESTING

UNS Electric typically commits a portion of its REST budget to provide technical research and support for the adoption and integration of intermittent renewable energy. Table 9 outlines UNS Electric's proposed budget for this work in 2019. UNS Electric plans to continue its commitment to furthering the integration of renewable energy and energy storage on its system by participating in the projects detailed in this section.

Table 9. UNS Electric's Research and Development Initiatives by Project

Renewable Integration Initiatives	Budget
Solar and Wind Forecast Integration Portal	\$ 15,000
UVIG, SEPA, AWEA Membership Dues	7,500
Total	\$ 22,500

A. Solar and Wind Forecast Integration

Due to the highly variable nature of renewable energy, both solar and wind, UNS Electric is requesting a continuance of its budget for operational forecasting from the University of Arizona ("UA"). These forecasts continue to be actively used by UNS Electric and its sister company, Tucson Electric Power's ("TEP") Wholesale Marketing and Operations departments. The forecasting portal has been key in helping both UNS Electric and TEP make purchasing decisions in Wholesale Marketing, as well as provides grid operators insight as to what is

occurring with renewable energy generators throughout the service territory. This budget will allow the UA, who furnishes the forecasts, to tailor their forecasts to the Company's service territory. The proposed budget for this program is \$15,000.

B. UVIG, SEPA, AWEA

To facilitate its compliance with the REST, TEP actively participates in three renewable industry associations: the Energy Systems Integration Group ("ESIG"), formerly the Utility Variable (Energy) Integration Group ("UVIG"), the Smart Electric Power Alliance ("SEPA"), and the American Wind Energy Association (AWEA). High penetrations of solar and wind make ESIG (a variable generation group) relevant, while SEPA and AWEA provide resources and expertise that help the Company manage renewable programs and stay informed on issues facing the industry. The proposed budget for these group fees is \$7,500.

VI. OTHER BUDGET ITEM DISCUSSIONS

A. Education and Outreach

UNS Electric is requesting a budget of \$60,000 for education and outreach. The Company is regularly asked to provide opportunities for customers to learn more about solar and how it impacts the grid. Under UNS Electric's in-process rate case, it will be critical that customers understand how solar will impact their bills. Also, UNS Electric and the Mohave Community College will join in a partnership to present solar workshops and exhibits. In addition to the traditional educational opportunities that UNSE engages in, the Company has been receiving increasing requests to help support small-scale solar demonstration projects with local non-profits and municipalities. The increase in this budget will allow for more of these engagement opportunities.

B. Labor

The 2019 budget for internal labor is \$50,000. The increase is due to extra support needed to process and handle higher volumes of applications. All internal employees that were part of the Plan during 2014, the Test Year for UNS Electric's rate case have been included in the Company's O&M for base rates.

There is a decrease to the External Labor budget to more accurately reflect an anticipated reduction of costs associated with legal support once the final stage of the Company's rate case has been closed. The budget amount for this line item is \$22,000.

VII. BIOMASS

On March 12, 2018, Chairman Forese, issued a request, as part of Docket No. E-00000Q-17-0138, to affected utilities that they include a section regarding electric generation from forest biomass in upcoming REST filings. Since this time, UNS Electric and its sister company, TEP, have met with Commission Staff and other parties, and discussed various methods of soliciting information from vendors. The Company's share of forest biomass component of the Energy Modernization Plan and Chairman Forese's proposed 60 MW is approximately 2 MW. The Companies believe that the best approach to understanding what types of forest biomass projects are available to them would be through a Request for Information ("RFI") process. An RFI process is similar to a Request for Proposal ("RFP"), in that information about potential project solutions will be understood; however, specific pricing is not discussed, and it is non-binding. On June 29, 2018, TEP issued an RFI to potentially interested parties, and will receive initial responses by August 3rd, 2018. The Company will file a supplemental report in this docket once the RFI results are available.

VIII. REQUEST FOR WAIVER

As discussed in Section 2, part C, the Company is no longer able to offer incentives in exchange for RECs associated with renewable DG from qualifying projects. Because of this, the Company will not be able to retire

enough RECs to meet the residential DG requirement in 2019. This is true, even in light of the fact that the overall amount of DG production on the system is estimated to exceed the requirement by more than double in 2019. Based on Decision No. 74365, the Company is respectfully requesting a full permanent waiver of the annual residential requirements of A.A.C. R14-2-1805 for 2019.

IX. CONCLUSION

UNS Electric's 2019 Implementation Plan was developed to allow the Company to cost-effectively comply with the REST requirements. The Company believes that the proposed Plan is prudent and in the public interest. UNS Electric respectfully requests that the Commission approve the UNS Electric 2019 REST Implementation Plan, including a permanent waiver of the 2019 residential DG Requirement, as submitted.

EXHIBITS

EXHIBIT 1: LINE ITEM BUDGET

Line Item Budget	Approved 2018	2019	2020	2021	2022	2023
Total REST Budget	\$ 8,948,854	\$ 9,248,972	\$ 8,802,947	\$ 8,449,778	\$ 7,805,724	\$ 7,336,386
Utility Scale Energy						
Above Market Cost of Conventional Generation	6,391,797	\$ 6,879,543	\$ 6,453,257	\$ 6,194,696	\$ 6,004,857	\$ 5,960,372
UNSE Owned	1,318,979	979,844	938,100	841,335	425,583	-
Subtotal	7,710,776	7,859,387	7,391,356	7,036,031	6,430,439	5,960,372
Customer Sited Distributed Renewable Energy						
Annual Performance Based Incentive (PBI)	892,297	892,297	892,201	872,890	809,290	785,501
Meter Reading	6,250	6,250	6,250	6,250	6,250	6,250
Consumer Education and Outreach	30,000	60,000	60,000	60,000	60,000	60,000
Subtotal	928,547	958,547	958,451	939,140	875,541	851,752
Technical Training: Internal and Contractor Training	37,500	37,500	37,500	37,500	37,500	37,500
Information Systems	20,000	20,000	20,000	20,000	20,000	20,000
Metering	146,532	258,038	270,940	284,487	298,711	313,647
Program Labor and Administration:						
Internal Labor	40,000	50,000	55,000	60,500	66,550	73,205
External Labor	22,000	22,000	24,200	26,620	29,282	32,210
Labor, Materials, Supplies	20,000	20,000	22,000	22,000	24,200	24,200
AZ Solar Website	1,000	1,000	1,000	1,000	1,000	1,000
Subtotal	83,000	93,000	102,200	110,120	121,032	130,615
Renewable Energy Research and Development:						
University of Arizona research projects	15,000	15,000	15,000	15,000	15,000	15,000
Dues and Fees	7,500	7,500	7,500	7,500	7,500	7,500
Subtotal	22,500	22,500	22,500	22,500	22,500	22,500
Total REST Budget	8,948,854	9,248,972	8,802,947	8,449,778	7,805,724	7,336,386
Carryover of REST Funds	(354,320)	591,319				
Total Amount for Recovery	\$ 9,303,174	\$ 8,657,653	\$ 8,802,947	\$ 8,449,778	\$ 7,805,724	\$ 7,336,386

**EXHIBIT 2: DEFINITION OF MARKET COST OF
COMPARABLE CONVENTIONAL GENERATION**

Market Cost of Comparable Conventional Generation

2019 Renewable Energy Standard and Tariff

OVERVIEW

Consistent with the Renewable Energy Standard Tariff (“REST”) Rules passed by the Arizona Corporation Commission (“Commission”), Unisource Electric (“UNS Electric”) Renewable Energy Standard and Tariff Implementation Plan contemplates recovery of expenses in excess of the Market Cost of Comparable Conventional Generation (“MCCCG”).” The Commission provided guidance on defining MCCCG in the context of its REST Rules and identified the MCCCG as “the Affected Utility’s energy and capacity cost of producing or procuring the incremental electricity that would be avoided by the resources used to meet the Annual Renewable Energy Requirement, taking into account hourly supply and demand circumstances. Avoided costs should include any avoided transmission, distribution, and environmental compliance costs.” This exhibit defines the methodology for developing the MCCCG rate for the Company.

METHODOLOGY

Annual MCCCG rates shall be calculated in advance and stated as a single \$/MWh value by renewable technology type. The renewable technology types will be based on projected hourly energy profiles for each type of renewable resource. Annual MCCCG rates will include renewable resources such as wind resources, solar photovoltaic systems (fixed-tilt and single-axis tracking), concentrated solar with storage, and bio-fueled resources. Specific MCCCG rates would be developed as needed when new renewable technologies or new purchase power agreements are added to the Company’s renewable portfolio. Annual MCCCG rates will capture the value of the seasonality and time of day delivery by deriving an average of on and off peak dispatch costs weighted by on and off peak renewable generation. MCCCG rates shall be calculated each year using the company’s production cost simulation software ‘AuroraXMP’. The hourly MCCCG rate determination criteria are shown in Table 1 below by comparing the types of renewable generation with the resource dispatch type. All projected MCCCG rates are based on the hourly marginal cost of a production cost simulation that forecasts adequate generation and transmission capacity to meet all firm load obligations including system reserve requirements. Finally, the cost of renewable generation above the annual MCCCG rates will be recovered through the REST Adjustor Mechanism and REST Tariff.

Table 1 - MCCCCG Hourly Rate Determination Matrix

Types of Renewable Generation Resources					
Resource Dispatch Type		Dispatchable Renewable Generation	Firm Renewable Generation	Non-Firm Renewable Generation	Curtailable Non-Firm Renewable Generation
	Wholesale sales transaction served from existing resource portfolio	The MCCCCG rate will be based on projected incremental production costs to serve firm load and wholesale sales opportunities for that hour. Costs will include any projected transmission, distribution and environmental compliance costs.			
	No market transactions. Generation available from thermal resource portfolio.				
	Day, week or month ahead purchase transaction to serve firm load requirements.	The MCCCCG rate will be based on the projected day, week or month-ahead firm purchase power transactions committed for that hour. Costs will include any projected transmission, distribution and environmental compliance costs.			
	Spot market transaction to serve firm load requirements.	The MCCCCG rate will be based on the projected Palo Verde spot market price for that hour. Costs will include any projected transmission, distribution and environmental compliance costs.			

CALCULATION

$$MCCCG_{on} = \text{Annual Average On Peak MCCCCG Rate} = \frac{\sum_{i=1}^{8760} PR_i * G_i * X_i}{\sum_{i=1}^{8760} G_i * X_i}$$

$$MCCCG_{off} = \text{Annual Average Off Peak MCCCCG Rate} = \frac{\sum_{i=1}^{8760} PR_i * G_i * (1 - X_i)}{\sum_{i=1}^{8760} G_i * (1 - X_i)}$$

$MCCCG_{Annual Rate}$ = Average of on and off peak MCCCCG rate weighted by projected on and off peak renewable generation.

It is assumed that there is a specific MCCCCG rate for each renewable technology type.

Where

PR_i = Projected Planning & Risk dispatch cost (\$/MWh) for hour $i=1,2,...,8760$.

G_i = Projected energy generation in renewable technology resource profile for hour $i=1,2,...,8760$.

$$X_i = \begin{cases} 1 & \text{if hour } i \text{ is an on peak market hour} \\ 0 & \text{Otherwise} \end{cases} \quad \text{for } i = 1, 2, \dots, 8760$$

Table 2 – UNS Electric’s 2019 MCCCCG Annual Rates

Renewable Technology	MCCCCG Annual Rates	2018 \$/MWh	2019 \$/MWh
	Solar PV	29.33	25.37
	AZ Wind	26.87	25.43
	Biomass	26.32	25.42
	NM Wind	26.78	24.80
	Solar CSP	29.49	25.10

**EXHIBIT 3: ABOVE-MARKET COST OF COMPARABLE
CONVENTIONAL GENERATION BY TECHNOLOGY**

****Confidential and Competitively Sensitive****

To be provided pursuant to the terms of the protective agreement in this docket.

Confidential and Competitively Sensitive
REDACTED

EXHIBIT 4: IP RESOURCES

IMPLEMENTATION PLAN - UNSE

Table 1 - Targeted Resources

		Ownership ¹	Targeted Completion	2008-2019 Total MW (AC)	2008-2019 Total MW (DC)	Targeted Energy Production (MWh or Equivalent)					
						2019	2020	2021	2022	2023	Total
Targeted Generation Resources:											
Solar:											
Black Mountain Solar	PPA	COMPLETE	8.90	9.87		20,324	20,223	20,122	20,021	19,921	100,611
Red Horse II (Expansion)	PPA	COMPLETE	30.00	37.50 ²		77,663	77,275	76,889	76,504	76,122	384,453
Kingman Wind Farm (Solar)	PPA	COMPLETE	0.24	0.30		505	502	500	497	495	2,500
Gray Hawk Solar	PURPA/PPA	6/13/2018	46.00	64.50		108,255	107,714	107,175	106,639	106,106	535,890
Rio Rico	UNSE	COMPLETE	5.76	7.20		9,350	9,303	9,256	9,210	9,164	46,283
La Senita	UNSE	COMPLETE	0.98	1.22		2,144	2,134	2,123	2,112	2,112	10,625
Jacobson	UNSE	COMPLETE	4.00	5.00		9,366	9,320	9,273	9,227	9,135	46,320
Wind:											
Kingman Wind Farm	PPA	COMPLETE	10.00			21,900	21,900	21,900	21,900	21,900	109,500
Total Targeted Generation				105.88	125.59	249,508	248,370	247,238	246,111	244,955	1,236,183
Targeted Distributed Energy Resources:											
Residential:											
Solar PV	UFI			10.0		-	-	-	-	-	-
Wind				0.3		-	-	-	-	-	-
Subtotal Residential				10.3		-	-	-	-	-	-
Non-Residential:											
Solar PV	UFI			2.5		-	-	-	-	-	-
Solar PV	PBI			4.7		-	-	-	-	-	-
Subtotal Non-Residential				7.2		-	-	-	-	-	-
Total Targeted DE				17.5		-	-	-	-	-	-
Total Targeted Resources				143.1		249,508	248,370	247,238	246,111	244,955	1,236,183

Notes:

¹ All utility-owned and Third Party generation projects are developed through a competitive RFP process, and all DE systems are built independently by Third Party developers and installers.

² Redhorse and associated expansion is a combined solar and wind 91MWac production limited plant comprised of 102.9 MWdc Solar and 30MWac wind. Total solar ac output subject to wind production will be from 61MWac to 75MWac.

EXHIBIT 5: IP RESOURCE COSTS

****Confidential and Competitively Sensitive****

To be provided pursuant to the terms of the protective agreement in this docket.

Confidential and Competitively Sensitive
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EXHIBIT 6: REST – TS1 RENEWABLE ENERGY
STANDARD TARIFF



UNS Electric, Inc.

Sixth Revised Sheet No.:

801-2

Superseding Fifth Revised Sheet No.:

801-2

UNS ELECTRIC STATEMENT OF CHARGES

Description	Rate	Effective Date	Decision No.
Rider-6 – Renewable Energy Standard and Tariff Surcharge REST-TS1 Renewable Energy Program Expense Recovery <u>Rate Class</u> For Residential Customers: For Small General Service: For Medium General Service: For Large General Service: For Interruptible Power Service: For Industrial Customers: For Lighting (PSHL):	\$0.0126 per kWh <u>Monthly Cap</u> \$4.90 per month \$45.00 per month \$190.00 per month \$450.00 per month \$275.00 per month \$11,250.00 per month \$130.00 per month	Pending	Pending
Rider-6 – Renewable Energy Standard and Tariff Surcharge REST-TS1 Renewable Energy Program Expense Recovery Per Decision No. 73638, customers receiving incentives on or after January 1, 2012 shall pay the average of the REST surcharge paid by members of their customer class. Customer with renewable installations without incentives that is interconnected with UNSE's system on or after February 1, 2013 shall pay the average of the REST surcharge paid by members of their customer class. The average price by class shall be the following: <u>Rate Class</u> For Residential Customers: For Small General Service Customers: For Medium General Service Customers: For Large General Service Customers: For Interruptible Power Service Customers: For Industrial Customers: For Lighting (PSHL):	<u>Average Rate</u> \$4.17 per month \$12.56 per month \$146.42 per month \$449.99 per month \$237.50 per month \$8,807.74 per month \$1.49 per month	Pending	Pending
Rider-8 Lost Fixed Cost Recovery (LFCR) Mechanism – Energy Efficiency Lost Fixed Cost Recovery (LFCR) Mechanism – Distributed Generation	1.1042% 0.3160%	July 1, 2018	76758
Rider-9 Transmission Cost Adjustor (TCA) – \$/kWh charge (Non-Demand) Transmission Cost Adjustor (TCA) – \$/kW charge (Demand)	\$0.000588 per kWh \$0.24 per kW	June 1, 2017	75697



UNS Electric, Inc.

~~Fourth~~ Revised Sheet No.:

801-2

Superseding ~~Fourth~~ ~~Fifth~~ Revised Sheet No.:

801-2

UNS ELECTRIC STATEMENT OF CHARGES

Description	Rate	Effective Date	Decision No.
<p>Rider-6 – Renewable Energy Standard and Tariff Surcharge REST-TS1 Renewable Energy Program Expense Recovery</p> <p><u>Rate Class</u> For Residential Customers: For Small General Service: For Medium General Service: For Large General Service: For Interruptible Power Service: For Industrial Customers: For Lighting (PSHL):</p>	<p>\$0.0155<u>0126</u> per kWh</p> <p><u>Monthly Cap</u> \$4.90 per month \$6045.00 per month \$190.00 per month \$4350.00 per month \$2475.00 per month \$11,250.00 per month \$130.00 per month</p>	<p>February 27, 2018Pending</p>	<p>76599Pending</p>
<p>Rider-6 – Renewable Energy Standard and Tariff Surcharge REST-TS1 Renewable Energy Program Expense Recovery</p> <p>Per Decision No. 73638, customers receiving incentives on or after January 1, 2012 shall pay the average of the REST surcharge paid by members of their customer class. Customer with renewable installations without incentives that is interconnected with UNSE's system on or after February 1, 2013 shall pay the average of the REST surcharge paid by members of their customer class. The average price by class shall be the following:</p> <p><u>Rate Class</u> For Residential Customers: For Small General Service Customers: For Medium General Service Customers: For Large General Service Customers: For Interruptible Power Service Customers: For Industrial Customers: For Lighting (PSHL):</p>	<p><u>Average Rate</u> \$4.27<u>17</u> per month \$1512.569 per month \$154.20146<u>42</u> per month \$350.00449<u>99</u> per month \$153.35237<u>50</u> per month \$9.925698<u>807.74</u> per month \$1.4976 per month</p>	<p>February 27, 2018Pending</p>	<p>76599Pending</p>
<p>Rider-8</p> <p>Lost Fixed Cost Recovery (LFCR) Mechanism – Energy Efficiency</p> <p>Lost Fixed Cost Recovery (LFCR) Mechanism – Distributed Generation</p>	<p>1.1042%</p> <p>0.3160%</p>	<p>July 1, 2018</p>	<p>76758</p>

Rider-9			
Transmission Cost Adjustor (TCA) – \$/kWh charge (Non-Demand)	\$0.000588 per kWh	June 1, 2017	75697
Transmission Cost Adjustor (TCA) – \$/kW charge (Demand)	\$0.24 per kW		

EXHIBIT 7: CUSTOMER LOAD PERCENTAGE
ANALYSIS

2019 Company Proposal

Customer Class	Total Revenue	Percent of Revenue	Average Bill (\$)	Monthly Cap (\$)	Percent of Bills at Cap	Percent of Load
Residential	\$ 4,295,802	49.6%	\$ 4.17	\$ 4.90	71.3%	52.2%
Small General Service	1,471,046	17.0%	12.56	45.00	8.2%	8.4%
Medium General Service	2,178,039	25.2%	146.42	190.00	49.7%	25.3%
Large General Service	89,548	1.0%	449.99	450.00	100%	6.3%
Interruptible Power Service	86,689	1.0%	237.50	275.00	73.4%	1.5%
Lighting	9,734	0.1%	1.49	130.00	0.2%	0.1%
Industrial & Mining	528,464	6.1%	8,807.74	11,250.00	68.3%	6.3%
Total	\$ 8,659,322	100.0%				100.0%

**EXHIBIT 8: RENEWABLE ENERGY PROGRAM
POLICIES AND PROCEDURES (“REPPP”)**

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I. FREQUENTLY ASKED QUESTIONS

What is Distributed Generation?

Distributed Generation (“DG”) is defined as electric generation sited at a customer premise, providing electric energy to the customer load on that site or providing wholesale capacity and energy to the local Utility Distribution Company for use by multiple customers in contiguous distribution substation service areas. The generator size and transmission needs shall be such that the plant or associated transmission lines do not require a Certificate of Environmental Compatibility from the Arizona Corporation Commission (“ACC”).

What are Distributed Renewable Energy Resources?

Distributed Renewable Energy Resources are applications of appropriate technologies that are located at a customer’s premise that displace conventional energy resources that would otherwise be used to provide electricity to Arizona customers.

UNS Electric, Inc. (“UNS Electric” or “Company”) provides programs consistent with these definitions and generally refers to these programs as DG programs. For more information on these and other definitions, please visit the ACC’s Renewable Energy Standard and Tariff webpage at <http://www.azcc.gov/divisions/utilities/electric/environmental.asp>.

Why is UNS Electric involved with DG?

The ACC, which regulates UNS Electric and utilities like it in Arizona, enacted the Renewable Energy Standard and Tariff (“REST”) Rules in 2008. These rules require UNS Electric to replace a substantial portion of its retail sales with renewable energy by investing in a variety of projects, including both utility-scale and DG projects. In order to comply with a portion of the REST Rules governing DG projects, UNS Electric supports the interconnection of customer-sited DG systems to its electrical grid. In order to report compliance with the REST rules to the ACC, UNS Electric will meter and record all DG production, even if RECs are not purchased.

What is Net Metering?

Net Metering refers to the production of electricity from a qualifying renewable energy electric generator, such as photovoltaic (“PV”) panels, used to offset electricity provided by UNS Electric. Customers deemed eligible for participation in UNS Electric’s Net Metering Tariff will be required to install a digital bi-directional meter capable of measuring the flow of electricity to and from the customer’s premises. Net Metering customers may buy and sell electricity to and from UNS Electric under the applicable terms and tariff rate.

No system may exceed 125% of connected load for that meter, where connected load is defined as the maximum demand divided by 0.6. For more information on Net Metering, please visit <https://www.uesaz.com/electric-rates/>.

What is Grandfathering?

Grandfathering is a policy that allows for customers to remain on net metering for up to twenty years after the date of their initial interconnection as long as the system remains in place and is not added to or has its

production capacity increased. Standard maintenance such as replacing defective or broken inverters and modules will not void a customer's net metering grandfathering term.

What is an Export Rate?

An Export Rate is the predetermined wholesale value that UNS Electric will pay a customer for DG that they export to the grid. As a result of the ACC's Value of Solar Decision, this export rate will be determined in UNS Electric's rate cases and then adjusted annually to reflect current market conditions. The export rate that UNS Electric pays a customer for the wholesale exported energy will be locked in for a period of up to 10 years after the date of the customer's initial interconnection as long as the system remains in place and is not added to or has its production capacity increase. Standard maintenance such as replacing defective or broken inverters and modules will not void a customer's export rate term.

For more information on the current Export Rate, please visit <https://www.uesaz.com/electric-rates/>.

What is a DG Rate?

A DG Rate is a tariff that is designed specifically for customers who install DG. As a result of the ACC's Value of Solar Decision, new customers that install DG must choose one of the DG rates available to them at the time of their interconnection to the system. The customer may switch between DG rates during the life of their facility; however, they must remain on a DG rate.

For more information on the current DG rates available, please visit <https://www.uesaz.com/electric-rates/>.

What is a UNS Electric-qualified installer?

A UNS Electric-qualified installer is an installer that has been evaluated by UNS Electric personnel and deemed to have met the prerequisites for qualification. In order to become UNS Electric-qualified, each installer must meet certain UNS Electric requirements, including but not limited to annual submittal of the necessary paperwork contained within the "Installer's Packet". Each submittal must include, but is not limited to the following: an Installer's Agreement, a current and valid Arizona Registrar of Contractor's ("AZROC") license appropriate for the solar technology being installed, Arizona business license in good standing, and similar information regarding any sub-contractor(s), if applicable. UNS Electric will not, under any circumstances, issue or assign incentive payment(s) to an installer who is not UNS Electric-qualified.

Where can I find more information?

For more information about UNS Electric's renewable energy plans, please consult UNS Electric's most recently approved REST Implementation Plan, which can be found online at <https://www.uesaz.com/get-started-with-solar/>. Questions may be directed to 866-467-1229.

What else do I need to know?

Each of the programs described herein, including all terms and conditions, are subject to change as dictated by program need and any and all regulatory authorities.

UNS Electric's REPPP does not accommodate non-customer sited projects for any reason. "Solar Farms" or other utility-scale generation projects do not qualify under UNS Electric's REPPP. These projects may participate in UNS Electric's next request for proposals ("RFP") for wholesale renewable energy.

UNS Electric's REPPP does not allow for any aggregated or virtual net metering of a customer's loads under any circumstance.

II. INSTALLER QUALIFICATIONS

All systems interconnecting to UNS Electric's system must be installed by an installer properly licensed by the state of Arizona and qualified to install solar projects. UNS Electric will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the AZROC with a license classification appropriate for the solar technology being installed. Alternatively, the installer must identify use of any sub-contractor(s) and ensure the subcontractor(s) maintain an appropriate license(s) on file with the AZROC for the solar technology being installed. Installers may not sub contract outside their scope of work per the AZROC rules; and
2. The installer must possess an Arizona business license that is active and in good standing.
3. Installers must have completed the UNS Electric Installer's Packet and have provided the above information to be retained on file with UNS Electric. The installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed by the end of the calendar year and resubmitted for participation in the upcoming program year.
4. Self-Install. If a customer desires to install a PV system on their home, a licensed electrical contractor must perform all applicable connections as required by the customer's local jurisdiction. All project documentation is still required.
5. All qualified installers will receive one (1) log-in credential and be granted access to UNS Electric's online DG application portal.

III. NET METERING AND RATE POLICIES

Customers that have interconnected to UNS Electric's system may have their solar PV system grandfathered into net metering, if they submitted their application to UNS Electric prior to the conclusion of UNS Electric's general rate case (Docket No. E-04204A-15-0142). Customers that submit their application after the Phase II conclusion are subject to the rules imposed in that decision. All policies and procedures regarding interconnection must be followed prior to meter sets and exchanges. All billing structures and rates are subject to ACC approval.

IV. PROHIBITION OF SYSTEM REMOVAL

Neither the Qualifying System nor any component thereof may be removed by any party, including but not limited to the applicant or future owners or occupants of the property until expiration of the Renewable Energy Credit Agreement or the last day of the final month of the final full calendar year of the applicable incentive payment term. If the Qualifying System or any component thereof is removed by any party in violation of this provision, the customer party to the Renewable Energy Credit Agreement shall immediately reimburse UNS Electric a prorated amount of the incentive amount paid by UNS Electric to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, UNS Electric shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the original Renewable Energy Credit Agreement's contracted operational life of the original system has expired.

UNS Electric shall attempt to monitor the number of missing or non-working distributed generation systems and shall summarize its observations in its annual Compliance Report.

For DG systems that did not receive incentives, the customer must still notify UNS Electric as to whether the system will be relocated or deemed out of service. This is necessary for UNS Electric's operations to maintain accurate records.

V. OTHER UNS ELECTRIC RENEWABLE ENERGY PROGRAMS

For customers who do not wish to operate a DG system, UNS Electric offers several other renewable energy programs.

- Bright Arizona Community Solar Program: UNS Electric offers an easy and affordable way for UNS Electric customers to meet their electric needs with locally generated solar power by purchasing solar power in "blocks" of 150 kWh per month. A customer may buy some or all of their power through the program. For more information, please see UNS Electric's Bright Arizona Community Solar webpage at <https://www.uesaz.com/community-solar/>

VI. INCENTIVES

UNS Electric currently does not offer any new Up-Front Incentive ("UFI") or Performance-Based Incentive ("PBI") programs. Only customers who entered into a PBI contract with UNS Electric in prior years will continue to receive ongoing incentive payments.

VII. GENERAL INTERCONNECTION PROCESSES

A. Application Process

UNS Electric's interconnection application process appears below. UNS Electric requires strict adherence to this process. Any deviation from the requirements below may result in your application being denied. If you are working with an installer or contractor, please ensure that they follow the required processes explained below.

1st Step: Submittal of the Properly Completed UNS Electric Online Application.

- Please visit <https://www.uesaz.com/get-started-with-solar/> for the online application submission portal. Applications for Residential and Non-Residential projects of all sizes are to be submitted online only.*

2nd Step: Submittal of Short Form Interconnection Agreement ("IA")

- Customers interconnecting a generating facility with UNS Electric's system must agree to certain provisions in order to be granted permission to operate the renewable generating facility in parallel with the utility.

3rd Step: Submittal of executed UNS Electric Consumer Acknowledgements:

- Customers buying, financing or leasing a solar distributed energy generation system ("System") must receive certain disclosures from the manufacturer and solar installers regarding warranties, payment obligations, performance data and major System components as set forth in A.R.S. § 44-1763. These acknowledgements must be signed by the customer and submitted as part of the online application.

*** Paperwork sent directly to any specific employee Company email address will not be processed.**

4th Step: Confirmation or Denial of Project Application.

- Once received, UNS Electric will match the application with the submitted Short Form IA. It is the customer's and/or installer's responsibility to ensure that all forms are filled out completely and correctly. **Forms with missing and/or incorrect information will be denied and a new application will need to be submitted. Outdated forms will be rejected.**
- UNS Electric will evaluate each application for completeness. UNS Electric will also verify, where an installer is used, that the installer is a UNS Electric-qualified installer. If UNS Electric has not received a completed installer packet, this will be required prior to application approval. Provided that the application meets UNS Electric's requirements, and that the installer, if any, is UNS Electric-qualified, UNS Electric will issue the customer and installer a reservation confirmation letter and provisionally approve the application.

5th Step: Submittal of Jurisdictional Final Inspection.

1. Failure to obtain a jurisdictional final inspection within 180 days for residential projects, and 365 days for non-residential projects, of the date of the application confirmation letter will result in the revocation of a customer's interconnection application. If this occurs, the customer or installer must reapply to participate in the program subject to all policies, procedures and rates in effect at time of reapplication.
2. In the event that a jurisdictional final inspection is not completed within the required timelines and the customer or installer provides proof to UNS Electric that a correctly completed application for a jurisdictional final inspection was made within the timeline required, UNS Electric will neither process nor revoke the customer's reservation for 30 days to allow customer time to confirm with the inspecting jurisdiction when the inspection will occur. Provided that the customer provides UNS Electric with an inspection date within those 30 days, the customer's reservation will be honored. If 30 days' elapses with no information from the customer, the application will be terminated and the customer must reapply to participate in the program subject to policies, procedures and rates in effect at time of reapplication.

6th Step: Submittal of Notification of Installation Completion ("NIC") Form.

For all program applications: once the jurisdictional final inspection has been approved, the installer or customer must complete the NIC and advance the project to the appropriate status in UNS Electric's.

7th Step: UNS Electric will confirm installation of your system.

8th Step: UNS Electric process of setting meters.

Upon receipt of the jurisdictional final inspection; the COC, and confirmation that all applicable SRs were adhered to, including, but not limited to, installation of Company-supplied placards, etc.; UNS Electric will set a solar energy production meter and change the customer's revenue meter to a net energy revenue meter.

B. Restrictions/Important Notes:

1. UNS Electric reserves the right to modify the business process to better serve customers or to increase efficiency. Please refer to <https://www.uesaz.com/get-started-with-solar/> for the most up-to-date information.
2. With the exception of minor system modifications during the procurement process, any material changes to a system made after the application is processed will result in cancellation of the existing application and will require a new online application to be submitted. The reservation request may be denied because the request is not in compliance with program requirements (see specific technical sections below).
3. Project extensions will not be granted except in extenuating circumstances and proof must be submitted.
4. Receipt of the application is not valid until a properly completed application, appropriate disclaimers and a completed Installer's Packet has been received by UNS Electric. Any application packets submitted incorrectly will be cancelled as will their corresponding online application.

5. In order to participate in the REPPP and/or submit DG applications online, installers must have on file with UNS Electric a completed Installer's Packet, which may include a New Supplier Fact Sheet. This document is available in the Installer's Corner at <https://www.uesaz.com/get-started-with-solar/>.
6. Any DG project larger than 10.0 kWac will be subject to engineering review to determine if the proposed project is on a shared transformer. In addition, all DG projects will be reviewed for available capacity on the transformer, and any project that exceeds the available capacity will be subject to engineering review. Following UNS Electric's SRs, customers may potentially be subject to a reduction in system size or upgrading of existing facilities at their own expense should it be determined necessary by UNS Electric Engineering. UNS Electric will review additional technologies that are coupled with PV DG based on the capacities and operating characteristics of those technologies independent of the DG.

VIII. OTHER PROJECTS

A. Technologies without Technology Specific Criteria

Technology specific criteria have not yet been developed for the following qualifying technologies:

- Fuel Cells
- Battery Systems
- Other

For applicants requesting interconnection for these technologies or for applicants requesting installation of a technology with specific project technology criteria, but where some criteria cannot be met, the applicant will need to submit design and output documentation. The Company will not permit any loads, technologies, or strategies not associated with the DG system that consume or divert, what would otherwise be considered DG production, before it is metered.

Applicants installing these systems will, at a minimum, need to provide an energy savings and designed output report for the system. The report must include either a testing certification for a substantially similar system prepared by a publicly funded laboratory or an engineering report stamped by a qualified registered professional engineer. The engineering report and/or testing certification shall provide a description of the system and major components, design criteria and performance expectations, applicable standards and/or codes, and a brief history of components in similar applications. Additional information may be required as part of the REPPP requirements.

All components must meet the requirements outlined in UNS Electric's Service Requirements.

B. Non-Conforming Projects

Non-conforming projects and their specific interconnection procedures will be identified as the Program evolves.

C. Guidelines for Photovoltaic Projects Interconnecting Without Incentives

Customers may install grid-tied photovoltaic electric systems behind their meter without incentives. If a customer chooses to do so, the customer shall still notify UNS Electric that a renewable energy generator is being connected

to UNS Electric's grid and complete any associated interconnection processes as defined above at [uesaz.com](https://www.uesaz.com). The process for non-incentive utility interconnection, for both residential and non-residential projects, is available at <https://www.uesaz.com/get-started-with-solar/>.

All projects must adhere to applicable SRs (including, but not limited to, SR-702) and DGIRs in order to be eligible for Net Metering. In addition to any applications required by the Renewable Resources department, all systems over 50 kW AC are required to submit Interconnection Applications to UNS Electric's Energy Services department. UNS Electric reserves the right to update application procedures and interconnection standards throughout the Program year as deemed necessary. Please visit [uesaz.com](https://www.uesaz.com) for the latest information.

For all approved residential interconnections, UNS Electric will furnish a DG production meter, DG meter socket, applicable placards, and AC disconnect in accordance with Company SRs. UNS Electric will install the DG production meter. For all non-residential interconnections, UNS Electric will furnish placards and the DG production meter. UNS Electric will install the DG production meter. Prior to meter installation on non-residential projects, the Company must be notified of wiring configuration so the appropriate 3-phase meter can be provided.

IX. GLOSSARY OF TERMS

ACC – Arizona Corporation Commission.

AZROC – Arizona Registrar of Contractors.

Applicant – Utility customer of record for the Utility Revenue Meter located at the installation site; a builder of the structure (residential or non-residential) who will reserve and install the Qualifying system; or for an off-grid Qualifying System, the property owner for the installation site located within a Utility's service territory.

Arizona Business License – A business license issued by the ACC.

Cancelled – Reservation Status indicating that a Reservation has been terminated, funding is no longer allocated, and the utility has removed the reservation from the funding queue.

Cancellation – The termination of the Reservation.

Commissioned – Qualifying System certified to be in operation.

Commissioning Package – Written verification signed by the installer and the customer confirming that the system has been installed in conformance with the approved reservation and that the system is ready for operation.

Conforming Project – Any project utilizing a renewable technology listed in Attachment D.

Conformance Inspection – Inspection performed by the utility to verify that the system has been installed and operates in conformance with the Reservation application.

Customer – Utility customer of record for the Utility Revenue Meter located at the installation site or a builder of the structure (residential or non-residential) who will reserve and install the Qualifying System.

Extension – The extension of the Reservation Timeframe.

Installer – The entity or individual responsible for the installation of a qualifying system.

Installed – The date of the final clearance from the appropriate jurisdiction

Interconnection Inspection – Inspection performed by the utility to confirm that the system can be safely interconnected to the power grid.

Non-Conforming Project – Non-conforming projects include, but are not limited to, projects with staged completion dates, multi-customer or multi-system projects, projects involving more than one technology, projects requiring new or unique agreement terms, projects with technologies for which qualification standards have not been developed or projects requiring non-standard timeframes.

Performance Based Incentive ("PBI") – Incentive based on a rate per actual kWh output or on equivalent kWh of energy savings.

Project Costs – System Costs plus financing costs.

Proof of Project Advancement – Documentation demonstrating that a project is progressing on schedule and is staged for Commissioning on or before the end of the Reservation Timeframe.

Qualifying System – Distributed renewable energy systems meeting the qualifications for production of qualified Renewable Energy Credits in Arizona acceptable to the Arizona Corporation Commission as they may be defined for affected utilities to meet any renewable energy standards.

Renewable Energy Credit (“REC”) – One Renewable Energy Credit is created for each kWh, or kWh equivalent for non-generating resources, derived from an eligible renewable energy resource. RECs shall include all environmental attributes associated with the production of the eligible renewable energy resource.

Reservation – A dollar amount committed by the utility to fund a project if all program requirements are met.

Reservation Status – Indicator relating to approval or denial of a Reservation request. If a Reservation is approved, the Reservation Status is Reserved. If a Reservation request is denied, the Reservation Status is either Cancelled or Wait Listed.

Reserved – Status indicating the acceptance of a Reservation request.

Reservation Timeframe – The duration of the utility’s funding commitment for a Reservation.

Retroactive System – A Renewable solar system installed before an application for incentive was received and approved by UNS Electric.

System Costs – Costs associated with the Qualifying System components, direct energy distribution, system control/metering, and standard installation costs directly related to the installation of the Qualifying System.

Up Front Incentive (“UFI”) – One-time incentive payment based on system capacity or estimated energy kWh production rather than on measured system output.

Wait List – Status indicating Applicant has met program requirements, but the Utility has insufficient funding to commit to funding the project.